(Middle and Upper Divisions.)

Eupatorium sessilifolium L.
E. perfoliatum L.
Oxydendrum arboreum DC.
Kalmia latifolia L.
Euphorbia corollata L.
Castanea vesca L.
Pinus mitis Michx.

UPPER SUBCARBONIFEROUS.—Heavy beds of limestones, found only on the highest knobs.

Hypericum nudicaule Walt.
Quercus nigra L.
Q. coccinea Wang.
Juniperus Virginiana L.

The Birdseye and Upper Birdseye, both pure limestones, are covered by cedars, to the exclusion of nearly everything else. On the Upper Subcarboniferous limestones cedar is present in large numbers, but does not attain such size as on the other formations; at every point at which I examined the Upper Subcarboniferous, if not covered with cedar, *Hypericum nudicaule* Walter is found in the greatest abundance.

The Oaks are represented by some species on most of the formations. *Quercus alba* L. is found in numbers on the Lower and Upper Hudson River Beds, and on the Medina sandstone, but seems to prefer the siliceous limestones at the base of the Trenton. *Q. obtusiloba* Michx. is found on all formations which give rise to a light or sandy soil. Excepting a few small trees on the Black Slate, *Q. imbricaria* Michx. is found only on the Lower Hudson River. So far as can be determined from observations in this county, *Q. nigra* L. and *Q. coccinea* Wang. are characteristic of the Upper Subcarboniferous.

Fagus ferruginea Ait. prefers a siliceous soil; and in Lincoln is most abundant on the siliceous limestones of the Trenton, but in the surrounding counties the beech forests are on the Middle Hudson River Beds—the "siliceous mudstones" of the old Kentucky reports.

Stanford, Ky.

EDITORIAL.

THE GAZETTE is naturally deeply interested in the success of the Agricultural Experiment Stations, because the establishing act makes such extensive provision for botanical investigation. It is because of our great interest in their work that we have ventured to express our opinion as to its direction and scope, and particularly as to the mode of presentation. It seems that some of the experiment stations think our advice

unwise—which is not surprising. It will consequently not be amiss to make our position clear.

It is certainly true that two main lines of botanical work were contemplated for the stations. One important feature is to be *original research;* the other, of equal importance, is the *diffusion* of knowledge among the practical gardeners, florists, nurserymen and farmers. The latter end may be accomplished by the publication of résumés of knowledge in particular lines. In the selection of the topics, good judgment is essential, if the publications are to meet with the favor of those who are to be benefited. Undoubtedly there are thousands of facts already known to physiologists which would be of interest and advantage to agriculturists to know. Once this is adequately done for any one subject the field will open for the carrying out of the original research which is contemplated. For no one can make a thorough study of a subject without finding out directions in which knowledge can be advanced. How many suggestions will be received and how fruitful in original work these will be will depend altogether upon the acuteness and skill of the individual. If our position so far is correct, it will be seen to necessitate the study of botanical literature, a point which we have insisted upon so often that it would be tiresome to say more.

But we must strongly insist that common honesty demands the separation of bulletins of information from bulletins of research. The latter, however, to be complete, must contain a statement of the previous knowledge, and these parts must be distinctly credited to their sources. It is hardly fair to conduct a series of experiments on ground that has already been covered by some foreign investigation and then to publish these as though the matter was new and the ideas originated with the last experimenter. But, it is urged, though the experiments have been conducted in another country, they are of little value because the plants and conditions are not identical with those of this country. Granted, for the sake of the argument; does it follow that when the experimenter publishes his results he should omit to state that the ground has already been traversed under such and such conditions, and to point out wherein the later experiments differ from the earlier ones? And if the experiments give the *same results* and point to the *same conclusions*, of what possible use is it to waste space and time in publishing the details?

If this publication of unimportant details continues with no reference to earlier literature, it will deepen the reproach of American botanical work, and will confirm the neglect with which it has to contend. Further, such work is open to the suspicion, whether true or not, that the failure to give due credit to other observers is prompted by a desire for the glory which of right belongs to others.